claims 7, 9, 10 and 15-17 is also being filed concurrently herewith with the appropriate fee. The Amendment and the Notice of Appeal are therefore being timely filed. Applicants respectfully request reconsideration and withdrawal of the pending rejection in view of the following amendments and remarks.

In The Claims:

Please cancel claims 7, 9, 10, 18 and 19 without prejudice or disclaimer to Applicants' right to pursue the subject matter of these claims in a later-filed application.

REMARKS

Claims 7, 9, 10, and 15-17 are currently pending in the application. Applicants have canceled herein claims 7, 9, 10, 18, and 19 without prejudice. Applicants note that claims 18 and 19 were withdrawn by the Examiner as being directed to a nonelected invention. Applicant reserve their right to file a divisional application directed to the subject matter of claims 18 and 19. Upon entry of the present amendment, claims 15-17 are pending.

35 U.S.C. §112, First Paragraph Rejection

Claims 7, 9, 10 and 15-17 were rejected under 35 U.S.C. 112, first paragraph, on the basis that the specification

allegedly fails to enable one skilled in the art to make and/or use the invention commensurate in scope with the claims. The breadth of the claimed invention was stated to be exceedingly large with no structural limitations for the inhibitory agents provided.

In reply, Applicants have canceled claims 7, 9, and 10, but reserve their right to file a continuation application directed to this subject matter.

Claims 15-17 are pending and are directed to an antibody capable of specifically inhibiting the fusion of a macrophage-tropic primary isolate of HIV-1 to a CD4+ cell. In regard to the previously submitted evidence of enablement, the Examiner stated that reliance upon exhibits published after the effective filing date are insufficient to prove enablement of the claimed invention as of the filing date of the application.

In response, Applicants are submitting herein a Declaration Under 37 C.F.R. §1.132 of Paul J. Maddon, M.D.,Ph.D. (**Exhibit A**), which addresses enablement of the present invention. Dr. Maddon is an inventor of the subject matter disclosed and claimed in the present specification. Dr. Maddon has over 20 years of research experience in making, screening and selecting antibodies, including monoclonal antibodies, having defined functional characteristics for cell

surface antigens including cell surface receptors. As pointed out by Dr. Maddon in his declaration, the making of antibodies to cell surface antigens on whole cells was a well defined technology as of June 7, 1996 (Maddon Declaration, ¶7). As elaborated by Dr. Maddon, the specification discloses the requisite teaching to allow one skilled in the art to make, screen and isolate an antibody having the characteristic of specifically inhibiting fusion of a macrophage-tropic primary isolate of HIV-1 to a CD4+ cell susceptible to infection by a macrophage-tropic primary isolate of HIV-1 without undue experimentation.

The specification provides a source of an immunogen (PM1 or equivalent cells) for eliciting an antibody, and a differential screening assay (RET assay) for selecting an antibody having the desired characteristics. The characteristics of the antibody are clearly defined, i.e., the ability to inhibit fusion of a macrophage-tropic primary isolate of HIV-1 to CD4+ cells. The specification provides specific examples of such fusion inhibiting antibodies and their reactivity pattern in Table 3 on page 61. As shown, the antibodies react with an antigen on the surface of PM1 cells, but do not react with CD4, and do not crossreact with an antigen on the surface of a SUP-T1 cell (Maddon Declaration, ¶8). As pointed out by Dr. Maddon, it is not necessary to know the antigenic determinant or epitopes on the surface of the whole cells used for immunization or the structural

configuration in order to make and identify antibodies having the defined characteristics (Maddon Declaration ¶9).

Using the methods as disclosed in the specification, Dr. Maddon and his colleagues made and screened for additional antibodies that inhibit HIV-1 envelope-mediated fusion between HeLa-env $_{JR-FL}$ cells and the CD4+ cells, PM1 cells, using the RET assay. These antibodies are described in the *Journal of Virology*, May 1999, p.4145-4155 (Maddon Declaration ¶10). Over one hundred hybridoma supernatants screened using the RET assay inhibited fusion by greater than 50%. Six fusion inhibiting antibodies were further characterized and all were determined to bind an antigen which is found on the surface of the macrophage cell line, PM1.

Applicants thus submit that as demonstrated above and as evident in the accompanying declaration of Dr. Maddon, the present specification provides a reproducible method for making, screening and selecting antibodies to allow one skilled in the art to obtain an antibody that specifically inhibits fusion of a macrophage-tropic primary isolate of HIV-1 to a CD4+ cell without undue experimentation. Reconsideration and withdrawal of the rejection of Claims 7, 9, 10 and 15-17 under 35 U.S.C. 112, first paragraph is therefore respectfully solicited. Entry of this Amendment after Final Rejection is requested since it is believed to

place the application in condition for allowance, or at a minimum to reduce the issues for appeal.

If a telephone interview would be of assistance in advancing prosecution of the subject application, applicants' undersigned attorney invites the Examiner to telephone at the number provided below.

No fee, other than the enclosed $460.00 fee for a three-month extension of time, is deemed necessary in connection with the filing of this Amendment and Response to Final Office Action dated September 11, 2001. However, if any additional fee is required, authorization is hereby given to charge the amount of any such fee to Deposit Account No. 03-3125.

Respectfully submitted,

Mark A. Farley

John P. White
Registration No. 28,678
Mark A. Farley
Registration No. 33,170
Attorneys for Applicant(s)
Cooper & Dunham, LLP
1185 Avenue of the Americas
New York, New York 10036
(212) 278-0400

I hereby certify that this correspondence is being deposited this date with the U.S. Postal Service with sufficient postage as first class mail in an envelope addressed to: Assistant Commissioner for Patents, Washington, D.C. 20231

Mark A. Farley 3-6-02

John P. White Date
Reg. No. 28,678
Mark A. Farley
Reg. No. 33,170